

- ☒ Drafts
- ☒ BRS: auto or automotive or vehicular or (motor adj vehicle) or car or traffic
- ☒ Pending
- ☒ Active
- ☒ L14: (1126) (342/70-72).CCLS.
- ☒ L15: (745881) lens
- ☒ L16: (43354) parallel near5 (ground or road or roadway or street)
- ☒ L17: (12) 14 and L15 and L16
- ☒ L22: (1904777) auto or automotive or vehicular or (motor adj vehicle) or car or traffic
- ☒ L23: (89279) radar
- ☒ L24: (16906) L22 and L23
- ☒ L25: (115043) multi-lobe or multi-beam or (multi adj (beam or lobe)) or multibeam or m
- ☒ L26: (1149) L24 and L25
- ☒ L27: (427) L26 and L15
- ☒ L28: (1389221) oblique or obliquely or slant or aslant or downward
- ☒ L29: (169) L27 and L28
- ☒ L30: (263797) oblique or obliquely
- ☒ L31: (83577) ("342").CLAS.
- ☒ L32: (119) L25 and L30 and L31
- ☒ L33: (1) (L32 not L29) and @ad<="20020222" and @pd>="20050414"
- ☒ L34: (0) L27 and L30 and @ad<="20020222" and @pd>="20050414"
- ☒ L35: (2911) ((342/70) or (342/71) or (342/72) or (342/76) or (342/79) or (342/104) or
- ☒ L36: (13) L35 and @nd<="20020222" and @pd>="20050414"
- ☒ Failed
- ☒ Saved
- ☒ S1: (1785257) auto or automotive or vehicular or (motor adj vehicle) or car or traffic
- ☒ S2: (83502) radar
- ☒ S3: (15114) S1 and S2
- ☒ S4: (106030) multi-lobe or multi-beam or (multi adj (beam or lobe)) or multibeam or m
- ☒ S5: (996) S3 and S4
- ☒ S6: (690833) lens
- ☒ S7: (282433) S5 and S6
- ☒ S8: (343) S5 and S6
- ☒ S9: (1321722) oblique or obliquely or slant or aslant or downward
- ☒ S10: (119) S8 and S9
- ☒ S11: (40833) parallel near5 (ground or road or roadway or street)

Search	Get	Browse	Refresh	Clear
DBs: US-PG&UB, USP&T, USOCR				
Default operator: OR				<input checked="" type="checkbox"/> Highlight all hit terms nicely
<div> <div>342/70</div> <div>342/71</div> <div>342/72</div> <div>342/76</div> <div>342/79</div> <div>342/104</div> <div>342/117</div> <div>342/174</div> <div>342/175</div> </div>				
<div> <div>Structured form</div> <div>Custom form</div> <div>BRS form</div> <div>ISAR form</div> <div>Hits</div> <div>Details</div> <div>Image</div> <div>Text</div> <div>HTML</div> </div>				

Document ID	Issue No	Pages	Title	Inventor	Current

	Search Terms	Total	USPAT	US-PGP	EPO	JPO	Derw
1	342/104	450					
2	342/117	163					
3	342/174	593					
4	342/175	776					
5	342/70	916					
6	342/71	387					
7	342/72	224					
8	342/76	52					
9	342/79	54					

**No text available to display**

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L14	1126	(342/70-72).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/03/06 09:49
L15	745881	lens	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 09:49
L16	43354	parallel near5 (ground or road or roadway or street)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 09:49
L17	12	14 and L15 and L16	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 09:49
L22	1904777	auto or automotive or vehicular or (motor adj vehicle) or car or traffic	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L23	89279	radar	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L24	16906	L22 and L23	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L25	115043	multi-lobe or multi-beam or (multi adj (beam or lobe)) or multibeam or multilobe or ((plurality or plural or multiple) near6 (beam or lobe))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29

## EAST Search History

L26	1149	L24 and L25	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L27	427	L26 and L15	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L28	1389221	oblique or obliquely or slant or aslant or downward	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L29	169	L27 and L28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L30	263797	oblique or obliquely	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L31	38577	("342").CLAS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/03/06 10:29
L32	119	L25 and L30 and L31	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L33	1	(L32 not L29) and @ad<="20020222" and @pd>="20050414"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:29
L34	0	L27 and L30 and @ad<="20020222" and @pd>="20050414"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:30

## EAST Search History

L35	2911	((342/70) or (342/71) or (342/72) or (342/76) or (342/79) or (342/104) or (342/117) or (342/174) or (342/175)).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2006/03/06 10:30
L36	13	L35 and @ad<="20020222" and @pd>="20050414"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/06 10:30

# SEARCH NOTES FOR EAST, IEEE, INSPEC, IP.COM, AND PROQUEST

**SERIAL NUMBER**

10505402

## **EAST SEARCH**

EAST: search history attached

## **IEEE SEARCH**

Search terms:

(auto <or> automotive <or> vehicular <or> (motor vehicle) <or> car <or> traffic) <and> radar <and> (multi-lobe <or> multi-beam <or> multibeam <or> multilobe)

1. **Vehicular spread spectrum radar using multi-beam antenna**  
Hanada, Y.; Kohno, R.  
Vehicular Technology Conference, 1997 IEEE 47th  
Volume 1, 4-7 May 1997 Page(s):116 - 120 vol.1
2. **A low cost W-band multi-beam Doppler radar for automotive applications**  
Rasshofer, R.H.; Biebl, E.M.  
Microwave Symposium Digest, 1997., IEEE MTT-S International  
Volume 2, 8-13 Jun 1997 Page(s):971 - 974 vol.2
3. **Performance analysis and optimization of vehicular spread spectrum radar using multi-beam antenna**  
Hanada, Y.; Kohno, R.  
Intelligent Transportation System, 1997. ITSC 97. IEEE Conference on  
9-12 Nov 1997 Page(s):661 - 666
4. **Multi-beam automotive radar front end using non-contact cylindrical NRD switch**  
Tanizaki, T.; Nishida, H.; Nishiyama, T.; Yamada, H.; Sakamoto, K.; Ishikawa, Y.  
Microwave Symposium Digest, 1998 IEEE MTT-S International  
Volume 2, 7-12 Jun 1998 Page(s):521 - 524 vol.2
5. **Design of a nonradiative dielectric Rotman lens in the millimeter wave frequency**  
Jae-Gon Lee; Jeong-Hae Lee; Heung-Sik Tae  
Microwave Symposium Digest, 2001 IEEE MTT-S International  
Volume 1, 2001 Page(s):551 - 554 vol.1
6. **A low profile 77 GHz three beam antenna for automotive radar**  
Kolak, F.; Eswarappa, C.  
Microwave Symposium Digest, 2001 IEEE MTT-S International  
Volume 2, 2001 Page(s):1107 - 1110 vol.2
7. **Millimeter-wave printed circuit antenna system for automotive applications**  
Denisenko, V.V.; Shubov, A.G.; Majorov, A.V.; Egorov, E.N.; Kashaev, N.K.  
Microwave Symposium Digest, 2001 IEEE MTT-S International  
Volume 3, 2001 Page(s):2247 - 2250 vol.3
8. **Compact multibeam imaging antenna for automotive radars**  
Schoenlinner, B.; Rebeiz, G.M.  
Microwave Symposium Digest, 2002 IEEE MTT-S International  
Volume 2, 2002 Page(s):1373 - 1376

9. **Offset cylindrical reflector antenna fed by a parallel-plate Luneburg lens for automotive radar applications in mm-wave**  
Young-Jin Park; Herschlein, A.; Wiesbeck, W.  
Antennas and Propagation Society International Symposium, 2002. IEEE  
Volume 4, 2002 Page(s): 588 - 591 vol.4
10. **Millimeter-wave folded reflector antennas with high gain, low loss, and low profile**  
Menzel, W.; Pilz, D.; Al-Tikriti, M.  
Antennas and Propagation Magazine, IEEE  
Volume 44, Issue 3, Jun 2002 Page(s): 24 - 29
11. **Wide-scan spherical-lens antennas for automotive radars**  
Schoenlinner, B.; Xidong Wu; Ebling, J.P.; Eleftheriades, G.V.; Rebeiz, G.M.  
Microwave Theory and Techniques, IEEE Transactions on  
Volume 50, Issue 9, Sep 2002 Page(s): 2166 - 2175
12. **Multi-beam antenna of short-range navigation system of a car**  
Lindvall, A.V.; Lindvall, V.R.; Shcherbakov, G.I.  
Microwave and Telecommunication Technology, 2002. CriMiCo 2002. 12th International Conference  
9-13 Sept. 2002 Page(s): 567 - 568
13. **Compact multibeam dual-frequency (24 and 77 GHz) imaging antenna for automotive radars**  
Schoenlinner, B.; Ebling, J.P.; Kempel, L.C.; Rebeiz, G.M.  
Microwave Conference, 2003. 33rd European  
Volume 2, 7-9 Oct. 2003 Page(s): 785 - 788 vol.2

## INSPEC SEARCH

Search history:

No.	Database	Search term	Info added since	Results	
1	INZZ	(auto OR automotive OR vehicular OR motor ADJ vehicle OR car OR traffic) AND radar AND (multi-lobe OR multi-beam OR multibeam OR multilobe)	unrestricted	37	

**Inspec – 1969 to date (INZZ)**

**Multi-beam antenna of short-range navigation system of a car.**

*Source*

12th International Conference 'Microwave and Telecommunication Technology' Conference Proceedings

(IEEE Cat. No.02EX570), 2002, p. 567-8, 5 refs, pp. xl+600, ISBN: 966-7968-12-X.

Publisher: Weber Publishing, Sevastopol-Moscow, Russia.

*Author(s)*

Lindvall-A-V, Lindvall-V-R, Shcherbakov-G-I.

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**Offset cylindrical reflector antenna fed by a parallel-plate Luneburg lens for automotive radar applications in mm-wave.**

*Source*

IEEE Antennas and Propagation Society International Symposium (IEEE Cat. No.02CH37313), 2002, vol.4,  
p. 588–91 vol.4, 6 refs, pp. 4 vol. (x+3440), ISBN: 0–7803–7330–8.  
Publisher: IEEE, Piscataway, NJ, USA.

**Author(s)**

Young–Jin–Park, Herschlein–A, Wiesbeck–W.

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**Design of a multi beam feed using a nonradiative dielectric Rotman lens.**

**Source**

IEICE Transactions on Communications, {IEICE–Trans–Commun–Japan}, June 2002, vol. E85–B, no. 6, p.

1178–84, 13 refs, CODEN: ITCMEZ, ISSN: 0916–8516.

Publisher: Inst. Electron. Inf. & Commun. Eng, Japan.

**Author(s)**

Jae–Gon–Lee, Jeong–Hae–Lee, Heung–Sik–Tae.

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**Wide–scan spherical–lens antennas for automotive radars.**

**Source**

IEEE Transactions on Microwave Theory and Techniques,  
{IEEE–Trans–Microw–Theory–Tech–USA},

Sept. 2002, vol. 50, no. 9, p. 2166–75, 17 refs, CODEN: IETMAB, ISSN: 0018–9480.

Publisher: IEEE, USA.

**Author(s)**

Schoenlinner–B, Xidong–Wu, Ebling–J–P, Eleftheriades–G–V, Rebeiz–G–M.

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1

**A low profile 77 GHz three beam antenna for automotive radar.**

**Source**

2001 IEEE MTT–S International Microwave Symposium Digest (Cat. No.01CH37157), 2001, vol.2, p.

1107–10 vol.2, 2 refs, pp. 3 vol.(Ixiii +xxiv+xxiii+2262), ISBN: 0–7803–6538–0.

Publisher: IEEE, Piscataway, NJ, USA.

**Author(s)**

Kolak–F, Eswarappa–C.

Editor(s): Sigmon–B.

COPYRIGHT BY IEE, Stevenage, UK

**Vehicular spread spectrum radar for multiple targets detection using multi–beam antenna.**

**Source**

IEICE Transactions on Fundamentals of Electronics Communications and Computer Sciences,  
{IEICE–Trans–Fundam–Electron–Commun–Comput–Sci–Japan}, Dec. 1997, vol. E80–A, no. 12, p.

2517–25, 10 refs, CODEN: IFSEEX, ISSN: 0916–8508.

Publisher: Inst. Electron. Inf. & Commun. Eng, Japan.

**Author(s)**

Hanada–Y, Kohno–R.

COPYRIGHT BY IEE, Stevenage, UK

**Vehicular spread spectrum radar using multi–beam antenna.**

**Source**

1997 IEEE 47th Vehicular Technology Conference. Technology in Motion (Cat. No.97CH36003), 1997, vol.1, p. 116-20 vol.1, 7 refs, pp. 3 vol. xxx+2247, ISBN: 0-7803-3659-3. Publisher: IEEE, New York, NY, USA.

**Author(s)**

Hanada-Y, Kohno-R.

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Inspec - 1969 to date (INZZ)

2

## IP.COM SEARCH

Search terms:

(auto or automotive or vehicular or (motor vehicle) or car or traffic) and radar and (multi-lobe or multi-beam or multibeam or multilobe)

**No records matched your search.**

## PROQUEST SEARCH

(auto or automotive or vehicular or (motor vehicle) or car or traffic) and radar and (multi-lobe or multi-beam or multibeam or multilobe)

**Compact wide scan-angle antennas for automotive applications and RF MEMS switchable frequency-selective surfaces**

*Schoenlinner, Bernhard*. Proquest Dissertations And Theses 2004. 172 pages; [Ph.D. dissertation].United States -- Michigan: University of Michigan; 2004. Publication Number: AAT 3122041.